

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1-7. (canceled).

8. (currently amended): ~~A power supply control system according to Claim 2, A power supply control system for supplying electric power to and starting a plurality of disk drive groups having at least one disk drive, comprising:~~

a power source;

a plurality of power supply circuits for supplying said plurality of disk drive groups individually with the electric power from said power source; and

a control circuit for controlling said plurality of power supply circuits,

wherein said control circuit generates, when said power source is turned ON, a circuit signal for turning ON said plurality of power supply circuits sequentially,

wherein said individual power supply circuits supply, when they receive said circuit signal, the corresponding disk drive groups with the electric power so that the starts of said plurality of disk drive groups do not overlap in time,

wherein said control circuit outputs, when a first set time elapses after said control circuit outputs the circuit signal for turning ON the power supply circuit corresponding to a certain disk

drive group, the circuit signal for turning ON the power supply circuit corresponding to a next disk drive group,

wherein each of said disk drive groups outputs a disk drive start initialization signal when ~~it~~ each of said disk drive groups initializes its start, and

wherein said control circuit includes:

a first timer means-circuit, which resets ~~reset~~ with the circuit signal for turning ON the power supply circuit corresponding to a certain disk drive group, for outputting a first time lapse signal when ~~a said first reset set~~ first reset set time elapses after reset;

a second timer means-circuit, which resets ~~reset~~ with the circuit signal for turning ON the power supply circuit corresponding to said certain disk drive group, for outputting a second time lapse signal before a second set time which is shorter than said first set time elapses after reset and where said disk drive start initialization signal is not received from said certain disk drive group, said first timer ~~means-circuit~~ being reset with said second time lapse signal;

a first counter means-circuit, which increases ~~increasing the~~ a counted value by one (1) each time ~~when~~ said circuit signal is inputted, for designating ~~the a~~ number of ~~the a~~ disk drive group to be started;

a first compare means-circuit for comparing, when said first time lapse signal and said second time lapse ~~signals-signal~~ are inputted, a preset maximum ~~of the numbers of all~~ number of disk drive groups and the number of the disk drive group designated by said first counter means, to output, where the number of the disk drive group designated by said first counter means is

smaller than said preset maximum, the number of the disk drive group designated by said first counter ~~means-circuit~~ as the number of the disk drive group to be ~~next~~-started next; and

a selector means-circuit for outputting the circuit signal for turning ON the power supply circuit corresponding to the number of said disk drive group to be ~~next~~-started next.

9. (currently amended): A power supply control system according to Claim 8,

wherein said first timer ~~means-circuit~~ includes:

a first oscillator for outputting pulse signals when said power source is turned ON;

a second counter means-circuit, which resets ~~reset~~-with an input of at least one of the circuit signal from said selector ~~means-circuit~~ and said second time lapse signal from said second timer ~~means-circuit~~, for counting said pulse signals from zero (0); and

a second compare means-circuit for comparing ~~the~~-a counted value of said second counter ~~means-circuit~~ with ~~the~~-a set value set as said first set time, to output, when they coincide, ~~the~~-a time lapse signal as said first time lapse signal.

10. (currently amended): A power supply control system according to Claim 8,

wherein said second timer ~~means-circuit~~ includes:

a second oscillator for outputting pulse signals when said power source is turned ON;

a switch means-circuit which is turned ON, when the circuit signal from said selector means is inputted, and OFF when the disk drive start initialization signal from said disk drive group is inputted;

a third counter means-circuit, which resets ~~reset~~ with an input of at least one of the circuit signal from said selector ~~means-circuit~~ and the disk drive start initialization signal from said disk drive group, for counting said pulse signals, as inputted through said switch ~~means-circuit~~, from zero (0); and

a third compare means-circuit for comparing the counted value of said third counter ~~means-circuit~~ with ~~the~~ a set value set as said second set time, to output, when they coincide, ~~the~~ a time lapse signal as said second time lapse signal.

11. (original): A power supply control system,

wherein said control circuit according to Claim 8 is realized by: a data input unit; a data processing unit operated on the basis of predetermined programs; and a data storing unit.

12. (currently amended): ~~A power supply control system according to Claim 3, A power supply control system for supplying electric power to and starting a plurality of disk drive groups~~ having at least one disk drive, comprising:

a power source;

a plurality of power supply circuits for supplying said plurality of disk drive groups individually with the electric power from said power source; and

a control circuit for controlling said plurality of power supply circuits,

wherein said control circuit generates, when said power source is turned ON, a circuit signal for turning ON said plurality of power supply circuits sequentially,

wherein said individual power supply circuits supply, when they receive said circuit signal, the corresponding disk drive groups with the electric power so that the starts of said plurality of disk drive groups do not overlap in time,

wherein said control circuit outputs, simultaneously as a certain disk drive group completes its start, the circuit signal for turning ON the power supply circuit corresponding to a next disk drive group,

wherein each of said disk drive groups outputs a disk drive start initialization signal, when it initializes its start, and outputs a disk drive start completion signal, when it ends its start, and

wherein said control circuit includes:

a second timer means circuit, which resets ~~reset~~ with the circuit signal for turning ON the power supply circuit corresponding to said certain disk drive group, for outputting a second time lapse signal before a second set time elapses after reset and where said disk drive start initialization signal is not received from said certain disk drive group, ~~said a first timer means circuit~~ being reset with said second time lapse signal;

a first counter means circuit, which increases ~~increasing the~~ a counted value by one (1) each time ~~when~~ said circuit signal is inputted, for designating ~~the a~~ number of ~~the a~~ disk drive group to be started;

a first compare means circuit for comparing, when said disk drive start completion signal or said second time lapse signal is inputted, a preset maximum ~~of the numbers of all~~ number of disk drive groups and the number of the disk drive group designated by said first counter

~~means~~circuit, to output, where the number of the disk drive group designated by said first counter ~~means~~circuit is smaller than said preset maximum, the number of the disk drive group designated by said first counter means as the number of the disk drive group to be ~~next~~-started next; and

a selector ~~means~~circuit for outputting the circuit signal for turning ON the power supply circuit corresponding to the number of said disk drive group to be ~~next~~-started next.

13. (currently amended): ~~A power supply control system according to Claim 4, A power supply control system for supplying electric power to and starting a plurality of disk drive groups having at least one disk drive, comprising:~~

a power source;

a plurality of power supply circuits for supplying said plurality of disk drive groups individually with the electric power from said power source; and

a control circuit for controlling said plurality of power supply circuits,

wherein said control circuit generates, when said power source is turned ON, a circuit signal for turning ON said plurality of power supply circuits sequentially,

wherein said individual power supply circuits supply, when they receive said circuit signal, the corresponding disk drive groups with the electric power so that the starts of said plurality of disk drive groups do not overlap in time,

wherein said control circuit outputs, after said control circuit outputs the circuit signal for turning ON a power supply circuit corresponding to a certain disk drive group, and at the earlier

one of the instant when a first set time elapses and the instant when said certain disk drive group completed its start, the circuit signal for turning ON the power supply circuit corresponding to a next disk drive group,

wherein each of said disk drive groups outputs a disk drive start initialization signal, when it initializes its start, and outputs a disk drive start completion signal, when it ends its start, and

wherein said control circuit includes:

a first timer means-circuit, which resets ~~reset~~ with either the circuit signal for turning ON the power supply circuit corresponding to a certain disk drive group or said disk drive start completion signal, for outputting a first time lapse signal when ~~a~~ said first reset-set time elapses after reset;

a second timer means-circuit, which resets ~~reset~~ with the circuit signal for turning ON the power supply circuit corresponding to said certain disk drive group, for outputting a second time lapse signal before a second set time elapses after reset and where said disk drive start initialization signal is not received from said certain disk drive group, said first timer ~~means~~ circuit being reset with said second time lapse signal, said second timer means being reset with said second time lapse signal;

a first counter means-circuit, which increases ~~increasing the~~ a counted value by one (1) each time when said circuit signal is inputted, for designating ~~the~~ a number of ~~the~~ a disk drive group to be started;

a first compare means for comparing, when any of said disk drive start completion signal, said first time lapse signal and said second time lapse signal is inputted, a preset maximum ~~of the numbers of all~~number of disk drive groups and the number of the disk drive group designated by said first counter ~~means~~circuit, to output, where the number of the disk drive group designated by said first counter ~~means~~circuit is smaller than said preset maximum, the number of the disk drive group designated by said first counter ~~means~~circuit as the number of the disk drive group to be ~~next~~-started next; and

a selector ~~means~~circuit for outputting the circuit signal for turning ON the power supply circuit corresponding to the number of said disk drive group to be ~~next~~-started next.

14. (currently amended): A power supply control system according to Claim 13,

wherein said first timer ~~means~~circuit includes:

a first oscillator for outputting pulse signals when said power source is turned ON;

a second counter ~~means~~circuit, which resets ~~reset~~ with an input of any of the circuit signal from said selector ~~means~~circuit, said second time lapse signal from said second timer ~~means~~circuit and said disk drive start completion signal, for counting said pulse signals from zero (0); and

a second compare means for comparing ~~the~~a counted value of said second counter means with ~~the~~a set value set as said first set time, to output, when they coincide, ~~the~~a time lapse signal as said first time lapse signal.

15. (original): A power supply control system,
wherein said control circuit according to Claim 13 is realized by: a data input unit; a data processing unit operated on the basis of predetermined programs; and a data storing unit.

16. (currently amended): A power supply control method for controlling the power supply to a plurality of disk drive groups each having one or more disk drives, comprising the steps of:

initiating the start of a disk drive group of a certain number;

deciding, if a disk drive start initialization signal is received after the start initialization and before ~~the~~ a lapse of a ~~first~~ second set time, and whether or not a ~~second~~ first set time elapses after the start initialization;

deciding whether or not all the disk drive groups have completed their starts, if the disk drive start initialization signal is not received before the lapse of the ~~first~~ second set time;

deciding whether or not all the disk drive groups have completed their starts, if the ~~decision reveals the lapse of the second~~ first set time lapses;

deciding again whether or not the second set time elapses after the start initialization, if the ~~second~~ first set time ~~does~~ did not elapse after the start initialization; and

~~completing the starts of the disk drive groups if all the disk drive groups completed their starts; and~~

initiating the start of a next disk drive group if the starts of all the disk drive groups are not completed, and

wherein the foregoing steps are performed ~~from the first disk drive group to the last disk drive group~~ on the plurality of disk drive groups until all the disk drive groups have completed their starts.

17. (currently amended): A power supply control method for supplying electric power to and starting a plurality of disk drive groups having at least one disk ~~drives drive~~ with an electric power, comprising the steps of:

initiating the start of a disk drive group;

deciding, if a disk drive start initialization signal is received after the start initialization and before ~~the a~~ a lapse of a ~~first~~ first set time, and whether or not a disk drive start completion signal is received after the start initialization;

deciding whether or not all the disk drive groups have completed their starts, if the disk drive start initialization signal ~~is~~ was not received before the lapse of said ~~first~~ first set time;

deciding whether or not all the disk drive groups have completed their starts, if ~~the decision reveals that the reception of~~ the decision reveals that the reception of said disk drive start completion signal is received;

deciding again whether or not said disk drive start completion signal is received after the start initialization, if said disk drive start completion signal is not received; and

~~completing the starts of the disk drive groups if the decision reveals that all the disk drive groups completed their starts; and~~

initiating the start of a next disk drive group if the starts of all the disk drive groups are not completed, and

wherein the foregoing steps are performed ~~from the first disk drive group to the last disk drive group~~ on the plurality of disk drive groups until all the disk drive groups have completed their starts.

18. (currently amended): A power supply control method for supplying electric power to and starting a plurality of disk drive groups having at least one disk ~~drives drive~~ with an electric power, comprising the steps of:

initiating the start of a disk drive group;

deciding, if a disk drive start initialization signal is received after the start initialization and before ~~the a~~ a lapse of a ~~first second~~ first-second set time, and whether or not a disk drive start completion signal is received;

deciding whether or not all the disk drive groups have completed their starts after the start initialization, if the disk drive start initialization signal is not received before the lapse of said ~~first-second~~ first-second set time;

deciding whether or not all the disk drive groups have completed their starts, if ~~the decision reveals that the reception of~~ said disk drive start completion signal is received;

deciding ~~again~~ whether or not ~~said second~~ a first set time elapses after the start initialization, if said disk drive start completion signal is not received;

deciding whether or not all the disk drive groups have completed their starts, if said ~~second-first~~ second-first set time elapses after the start initialization;

deciding again whether or not ~~all the disk drive groups have completed their starts~~said
disk drive start completion signal is received, if said ~~second~~first set time does not elapse after
the start initialization; and

~~completing the starts of the disk drive groups if all the disk drive groups completed their~~
~~starts; and~~

initiating the start of a next disk drive group if the starts of all the disk drive groups are
not completed, and

wherein the foregoing steps are performed ~~from for all the disc drive groups from the first~~
~~disk drive group~~on the plurality of disk drive groups until all the disk drive groups have
completed their starts.